

Amendments to the Drawings:

The attached two (2) sheets of formal drawings replace the previously submitted informal drawings for Figures 1 and 3. No new subject matter has been added by the submission of these formal drawings.

Attachment: Replacement Sheets (2 pages)

Remarks

The Applicant respectfully requests reconsideration of this application in view of the following remarks. In this response, claims 1 and 2 have been amended, no claims have been cancelled and six new claims, i.e., claims 14-19, have been added. Hence, upon entry of this amendment, claims 1-5, 7-11 and 13-19 are presented for examination.

New Title

A proposed amendment to the title is included herein to make it more specific and technically accurate. The Examiner's review and approval of the proposed new title is respectfully requested.

Request for Approval to Amend Drawings Under 37 C.F.R. §1.121(d)

Three reference numbers were inadvertently left out of Figure 1. The undersigned proposes adding reference number 100, 102 and 110 to Figure 1 to conform the drawing to the specification. Among other places, reference to elements 100, 102 and 110 are made in the specification at page 4, lines 28-29 and page 5, lines 23-24.

Accordingly, the undersigned has included herewith a marked up original of Figure 1 reflecting the proposed changes in the form of an "Annotated Sheet." No new matter has been added. The Examiner's approval is respectfully requested for the proposed changes to Figure 1.

Claim Rejection – 35 U.S.C. § 112

In the Office action, the Examiner rejected claim 2 under 35 U.S.C. §112, second paragraph. The Applicant submits herein proposed amendments to claim 2, which are thought to address the Examiner's concerns.

Claim Rejections – 35 U.S.C. § 103
Chan in view of Poisson, Dobbins and Reichmeyer

In the Office action, the Examiner rejected claims 1 and 3-8 under 35 U.S.C. §103(a) for allegedly being unpatentable over a publication entitled “Customer Management and Control of Broadband VPN Services” by Chan et al (hereafter “**Chan**”) in view of US Pub. No. 2003/0033401 of Poisson et al. (hereafter “**Poisson**”) in view of US Patent No. 5,825,772 of Dobbins et al. (hereafter “**Dobbins**”) and in view of US Patent No. 6,286,038 of Reichmeyer et al. (hereafter “**Reichmeyer**”). The undersigned respectfully disagrees with the Examiner’s characterization of the teachings and/or applicability of Chan, Poisson, Dobbins and Reichmeyer to the claims and points out several distinctions between the claimed subject matter and the relied upon references individually and in combination.

As presently understood by the undersigned, Chan generally relates to providing broadband virtual private network (VPN) service subscribers with control and management of different objectives, such as the type of traffic to be carried over the VPN, call priority schemes, quality of service (QoS) requirements and efficient use of VPN resources. Chan’s focus is providing what best can be described as “performance tuning” by allowing a subscriber to control various aspects of the logical and physical *paths between switches* participating in the virtual private network (VPN) (e.g., virtual circuit (VC)-based control, virtual path (VP)-based control and virtual path group (VRG)-based control). Chan makes no mention of allocating to subscribers and subsequently allowing the subscribers to configure network processing resources *within the individual switches* of the provider network.

The Examiner relies on Poisson solely for its alleged teachings with regard to “the limitation of a service provider management server communicably coupled to the service processing switch” (citing paragraph [0031]). The Examiner relies on Dobbins solely for its alleged teachings with regard to virtual routers and a virtual router directory (citing ref. no. 198 of Fig. 19 and col. 20, ll. 51-61). The Examiner relies on Reichmeyer solely for its alleged teachings with regard to “a virtual router with differing subset [*sic*] (subdomain router).”

Before addressing the particular deficiencies of the proposed combination of references with respect to the claims, the undersigned respectfully submits a *prima facie* case of obviousness has not been established by the Office Action as no basis in the prior art has been established for modifying Chan to include the alleged teachings of any of the secondary references.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, **there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.** Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. In the present circumstances, it is respectfully submitted that the Examiner has failed to make a credible showing with respect to at least the first criterion. Importantly, no credible or legitimate basis in the prior art has been established for modifying Chan to include the teachings of Poisson, Dobbins or Reichmeyer.

For its purported motivation to combine Poisson with Chan, the Office action merely states at pg. 4:

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Chan in view of Poisson ***so as: to have communication between the provider and VPG via a switch.*** one [sic] would be motivated to do so to enable a remote user to access resources on different networks in the VPG. As per claims 3-e [sic], the combination [of] ***Chan and Poisson implicitly and explicitly teach a plurality of network resources that includes*** [sic] a packet filter, firewall, network address translation module, a ***virtual router***[,] a VPN and multiple processing elements.
(emphasis added)

However, the Examiner then proceeds to undermine his position by indicating “[i]n addition, Chan and Poisson fail to explicitly detail [sic] on virtual routers.”

With respect to the Examiner’s position that it would have been obvious to modify Chan in view of Poisson “to have communication between the provider and VPG via a switch,” the undersigned respectfully submits the virtual path groups (VPGs)

discussed in the context of Chan are already within the service provider network. Consequently, it is respectfully submitted that the Examiner's asserted motivation to modify Chan with Poisson adds no value to Chan and therefore would not motivate the Examiner's proposed combination.

For its purported motivation to combine Dobbins and Reichmeyer with Chan and Poisson, the Office Action merely states at pg. 5:

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Dobbins and Reichmeyer virtual routers to [sic] Chan's system **because they would enable resolution of reachability of destination networks.**
(citing Dobbins, col. 21, lines 1-4) (emphasis added)

Without even addressing the accuracy of the above Dobbins citation or its correctness, the undersigned is at a loss to even comprehend how the "resolution of reachability of destination networks" has any bearing on the claims or how it would provide sufficient motivation to one skilled in the art to combine the customer management functionality of Chan with any of Poisson, Dobbins or Reichmeyer. The undersigned respectfully submits Chan's focus on providing control over aspects of the logical and physical ***paths between switches*** participating in the virtual private network (VPN) (e.g., virtual circuit (VC)-based control, virtual path (VP)-based control and virtual path group (VRG)-based control) and complete disregard for the independent allocability of network processing resources ***within the individual switches*** of the provider network, illustrates a lack of contemplation regarding the problem being addressed by various embodiments of the present invention – let alone contemplation for the solution.

Turning now to the purported motivation to combine provided by Dobbins, the undersigned has reproduced below col. 21, lines 1-4:

embodiment, enables resolution of the reachability of destination IP and IPX networks that are located somewhere behind an access switch; in addition, for IPX clients it enables finding of the nearest IPX Network server.

Importantly, putting this passage into context, the undersigned respectfully submits ***it is the "Secure Fast Routing Services (SFRS)" of Dobbins***, which makes use

of the virtual router directory 198, ***that “enables resolution of the reachability” – not the presence of a virtual router*** (see col. 20, l. 58 to col. 21, l. 4). Assuming the validity of the asserted motivation to combine, the purported combination addresses defects of Chan completely unrelated to the deficiencies of Chan with respect to the claims (e.g., Chan’s lack of intra-switch network resource-level control and/or management by subscribers to which the network resources have been allocated). As a result, to the extent there is any motivation to combine Chan with Poisson, the result of the combination remains deficient with respect to expressly recited limitations of the claims as will be described further below.

Meanwhile, the Examiner does not attribute to Chan, Poisson or Reichmeyer any suggestion or motivation to combine. Since the references themselves do not provide the suggestion or motivation to combine, the Examiner appears to have used the Applicant’s teaching and a bit of hindsight to hunt through the prior art for claimed elements. If this is not the case and to the extent the Examiner continues to rely on the combination of Chan with one or more of Poisson, Dobbins and Reichmeyer (or any other piece of prior art relating virtual routers – for that matter), the undersigned respectfully requests the Examiner to explain the rationale and the specific understanding and/or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of the claimed invention to make the combination in the manner expressly recited by the claims.

Returning to Chan, due to its focus on indirect management and/or control of ***paths between switches*** participating in the virtual private network (VPN), it has no use for or interest in allocating network processing resources ***within the individual switches*** of the provider network. Consequently, even if the secondary references include the functionality attributed to them by the Examiner, there would still be ***no motivation to combine*** Chan with the secondary references. As a result, ***the Examiner has not indicated any credible teaching, suggestion or incentive to support the combination; and no prima facie case of obviousness has been established.***

To the extent that a prima facie case of obviousness has been established and with the above brief overviews of Chan, Poisson, Dobbins, and Reichmeyer in mind, the undersigned now submits the following arguments to point out significant differences

between the invention as claimed by the Applicant and the combination of Chan, Poisson, Dobbins, and Reichmeyer.

Briefly and by way of background, various embodiments of the present invention involve an architecture and methodology for providing a subscriber of a service provider to, among other things, manage, control and configure network resources of a service provider switch that have been allocated to the particular subscriber.

Regarding independent claim 1, Chan, Poisson, Dobbins and Reichmeyer do not reasonably teach or suggest individually or in combination a first subscribing entity configuring a plurality of network resources of a service processing switch of a service provider “by allocating a first set of virtual routers ... to which the subset of the network resources have been allocated to the first subscribing enterprise.” As indicated above, there is no motivation to combine Chan with Poisson and further no motivation to combine Chan and Poisson with Dobbins and/or Reichmeyer. Even if combined, Chan is deficient with respect to at least the limitation of claim 1 relating to allocating network resources of a service provider switch to subscribers and subsequently allowing the subscribers to configure the allocated network processing resources; and none of Poisson, Dobbins or Reichmeyer address at least this deficiency. For at least this reason, claim 1 and its dependent claims, which add further limitations, are clearly distinguishable over the combination or references currently relied upon by the Examiner.

Claim Rejections – 35 U.S.C. § 103
Chan in view of Dobbins and Reichmeyer

In the Office action, the Examiner rejected claim 2, 9-11 and 13 under 35 U.S.C. §103(a) for allegedly being unpatentable over Chan in view of Dobbins and Reichmeyer. The undersigned respectfully disagrees with the Examiner’s characterization of the teachings and/or applicability of Chan, Dobbins and Reichmeyer to the claims and points out several distinctions between the claimed subject matter and the relied upon references individually and in combination.

As an initial matter, as indicated above, the undersigned respectfully submits a *prima facie* case of obviousness has not been established by the Office action as no basis in the prior art has been established for modifying Chan to include the alleged

teachings of Dobbins and/or Reichmeyer. To the extent the Examiner insists on continuing to rely on the combination of Chan with one or more of Dobbins and Reichmeyer (or any other piece of prior art purportedly relating virtual routers – for that matter), the undersigned respectfully requests the Examiner to explain the rationale and the specific understanding and/or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of the claimed invention to make the combination in the manner expressly recited by the claims.

Regarding independent claim 2, Chan, Dobbins and Reichmeyer do not reasonably teach or suggest individually or in combination “allocating ... a subset of network processing resources of a service processing switch operated by the service provider to one or more virtual routers ... executing on the service processing switch,” “allocating at least one of the one or more virtual routers to a subscribing enterprise ... associated with the service provider,” “receiving ... a configuration request related to the subset of network processing resources allocated to the at least one virtual router from the subscribing enterprise” and “configuring the subset of network processing resources in accordance with the configuration request by processing the configuration request by the service provider management system server.” As indicated above, none of Chan, Dobbins or Reichmeyer teach or reasonably suggest allocating virtual routers of a service processing switch of a service provider to a subscriber. Consequently, the combination of references relied upon by the Examiner cannot be fairly said to configure the subset of network processing resources that are allocated to one or more of the virtual routers. For at least these reasons, claim 2 and its dependent claims, which add further limitations, are thought to be clearly distinguishable over the asserted combination of Chan, Dobbins and Reichmeyer.

Conclusion

Applicant respectfully submits that the amendments and remarks presented herein have overcome the rejections, and that the pending claims are in condition for allowance. Accordingly, Applicant requests that the rejections be

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withdrawn and that a Notice of Allowance be promptly issued for claims 1-5, 7-11 and 13-19.

Request for a Telephone Interview

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-284-5103.

Respectfully submitted,
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